



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,541	10/16/2006	Akira Okabe	F-9223	3771
28107 7590 05/22/2008 JORDAN AND HAMBURG LLP 122 EAST 42ND STREET SUITE 4000 NEW YORK, NY 10168				
EXAMINER				
LEE, CHEUNG				
ART UNIT		PAPER NUMBER		
2812				
MAIL DATE		DELIVERY MODE		
05/22/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,541

Applicant(s)

OKABE ET AL.

Examiner

CHEUNG LEE

Art Unit

2812

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 9-27-06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on September 27, 2006 was filed before the first action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

2. The abstract of the disclosure is objected to because it exceeds 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-5 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yang et al. (US Pat. 6444027; hereinafter "Yang").

4. Referring to figures 1-5 and related text, Yang discloses [Re claim 1] a wafer support 36 that supports a semiconductor substrate 38 in a reaction chamber 34 (see fig. 3), into which a reaction gas is supplied (col. 7, lines 30-36), the wafer support being arranged so that a predetermined gas flows into a predetermined space (col. 7, lines

36-47) that is formed between a semiconductor substrate setting surface 49 (9 in fig. 1) and the semiconductor substrate (see figs. 1 and 3) and is connected to an outer surface other than the semiconductor substrate setting surface (see fig. 3; the wafer support 36 is attached to rotatable support means 58 and 59, which are connected to an outer surface other than the semiconductor substrate setting surface 49).

5. Referring to figures 1-5 and related text, Yang discloses [Re claim 5] a semiconductor substrate 38 processing method for setting a semiconductor substrate on wafer support 36 disposed inside a reaction chamber 34 (see fig. 3) and supplying a reaction gas into the reaction chamber (col. 7, lines 30-32; col. 8, lines 21-26) to form a thin film on the semiconductor substrate (col. 8, lines 25-30), the semiconductor substrate processing method being characterized in that the thin film is formed on the semiconductor substrate while making a predetermined gas flow into a predetermined space (col. 7, lines 30-36; col. 8, lines 22-40) that is formed between a semiconductor substrate setting surface 49 (9 in fig. 1) of the wafer support and the semiconductor substrate (see figs. 1 and 3) and is connected to an outer surface other than the semiconductor substrate setting surface (see fig. 3; the wafer support 36 is attached to rotatable support means 58 and 59, which are connected to an outer surface other than the semiconductor substrate setting surface 49).

6. Yang discloses [Re claims 3 and 7] wherein the predetermined gas is hydrogen (col. 7, lines 30-35; col. 8, lines 30-35).

7. Yang discloses [Re claim 6] wherein the predetermined gas is supplied from a substantially central region (44, 45, 46) of the wafer support. Holes 44, 45 and 46,

Art Unit: 2812

which are located substantially central region of the wafer support, are used to supply the predetermined gas (col. 7, lines 36-42).

8. Yang discloses [Re claims 4 and 8] wherein the predetermined gas is an inert gas (col. 7, lines 30-35; col. 8, lines 30-35).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yang as applied to claim 1 above, and further in view of Dietze et al. (US Pat. 6184154; hereinafter "Dietze").

10. [Re claim 2] Yang fails disclose expressly wherein a supply source of the predetermined gas is formed at a substantially central region of the wafer support.

Referring to figures 1-5 and related text, Dietze discloses wherein a gas inlet port 32, which is located substantially central region of a wafer support 18, is used to supply purge gases, such as H_2 and N_2 (col. 7, lines 1-19).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a gas inlet located substantially central region of a wafer support, as taught by Dietze., because it would have been to promote uniform flow of gas over the backside of a wafer (Dietze, col. 7, lines 9-19).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHEUNG LEE whose telephone number is 571-272-5977. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on 571-272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2812

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cheung Lee/
Examiner, Art Unit 2812
May 19, 2008

/Charles D. Garber/
Supervisory Patent Examiner, Art Unit 2812